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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,793	07/11/2005	Ulf Petersson	ABE-37204	7321

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EXAMINER	
MARC, MCDIEUNEL	

ART UNIT	PAPER NUMBER
3664	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/516,793	PETERSSON ET AL.	
	Examiner	Art Unit	
	MCDIEUNEL MARC	3664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12/03/2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-36 are pending.

2. The abstract of the disclosure is objected to because of the word "means" and "invention". Correction is required. See MPEP § 608.01(b).

3. Claims 1-36 are objected to because of the following informalities: The claims are replete with the word "patent claim". Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-36 are rejected under 35 U.S.C. 102(e) as being anticipated by **Bartsch et al.** (US 6459955 B1).

As per claims 1 and 21, **Bartsch et al.** teaches a home cleaning robot which falls in the same category of a lawn-mowing robot that equates to a system and an associated m*ethod for maneuvering a self-propelling device (5) by means of an electronic navigational control system comprising at least a navigational control station (3) connected to at least one signal generator (1) and one sensing unit (14,15,16) arranged at the self-propelling device (5)* (see fig. 8A), *whereby the sensing unit (14,15,16) at least senses an, in the air-medium propagating* (see fig. 8A, element 112), *time and space varying magnetic field, transmitted by the navigational control station (3) and in turn retransmits at least one, by the sensing unit (14,15,16) processed signal to at least one drive source that contributes to the device's (5) movements across a surface, the signal generator (1) sends a through the navigational control system (3)* (see fig. 8A, elements 112, 120, 116 and fig. 13, element 488), *the current generating the time and space varying magnetic field (43,44,52,54), whereby the sensing unit (14,15,16) maneuvers the device (5) based on the properties of the sensed magnetic field (43,44,52,54), characterised in that said sensed magnetic field (43,44,52,54)* (fig. 13, element 488 as noted above), *in an area mainly within the range of the navigational control station (3), at least at one point of time has different directions (50,51)* (see fig. 8A, element 116 and fig. 7); *) processed, signal to at least one driving source that contributes to the device's movements across an area* (see fig. 8A, particularly drive and steering).

As per claim 2-12, 14, 15, 22-25, 35 and 36, **Bartsch et al.** teaches a home cleaning robot which falls in the same category of a lawn-mowing robot including a *device (5), when moving in a course direction and senses an unchanged magnetic field strength (44,54), changes directions 90 degrees, that the device, when moving in a course direction and senses an increased magnetic field strength (44,54), continues in the same course direction and that the device, when moving in a course direction and senses a decreased magnetic field strength (44,54), changes course directions 180 degrees* (see figs. 8A and 7); *a device (5) moves in a course direction that corresponds to that the sensed magnetic field (44, 54) is constant* (see fig. 8A, elements 110, 112 and 116)*; a device (5), when sensing that the magnetic field (44,54) changes directions (55), continues to move a certain distance in the same direction* (see fig. 7), *then stops and turns until it again detects that the magnetic field (44,54) changes directions (55), whereupon it moves essentially in the same direction as a line (55), which ties together points where the sensed magnetic field (44,54) changes directions* (col. 6, lines 24-33 and fig. 7)*; a sensing unit (14,15,16), when sensing the magnetic field (43,52) within the range of the navigational control station (3), adapts its processing of the sensed magnetic field (43,52)* (see fig. 8A, elements 120, 118, 112, 116 and fig. 7); *at least one signal generator (1) sends a first current trough the navigational control station (3), whereby the magnetic field (43,44), generated by the current at a point of time mainly inside the range of the navigational control station (3)* (see fig. 7, wherein 0˚, 90˚, 180˚ being considered as inside range and fig. 13, element 488), *has a direction essentially opposed to the direction of the magnetic field (43,44) at the same point of time mainly outside of the mentioned range* (see fig. 7, wherein Θ being considered as outside range); *at least one signal generator (1) sends a second current through the navigational control station (3) and*

the mentioned (1) or another signal generator (1) sends a third current through the navigational control station (3), whereby the magnetic field (43,44) (see fig. 15, elements 560C and 560D, has been considered as second power/current generation and elements 428 and 562 being considered as third power/current generation), *generated by the second current in a second area mainly within the range of the navigational control station (3), at a point of time has a direction essentially corresponding to the direction (46) of the magnetic field (43,44) generated by the third current at the same point of time in a third area mainly within the range of the navigational control station (3)* (see figs. 7 and 8A).

With respect to claim 13, wherein having *at least one current in the system constitutes a sinus component* falls under design choice.

As per claim 16, **Bartsch et al.** teaches a home cleaning robot which has an *adaptation means that the sensing unit (14,15,16) synchronises the unit's (14,15,16) working frequency in the time domain based on the reference current pulse (7)* (see col. 26, 51-56 and fig. 15).

As per claims 17-20, **Bartsch et al.** teaches a home cleaning robot having *an adaptation means that the sensing unit (14,15,16) synchronises the properties of the time intervals in the time domain based on the properties of the reference current pulse (7,9,11)* (see col. 20, line 51 – to – col. 21, line -4); *other current pulses (7,9,11) in the system so that no current pulses (7,9,11) coincide at the same time during the same signal period (8)* (see col. 20, line 51 – to – col. 21, line -4, wherein the rheostat can be opened by design choice therefore result into no current pulses).

As per claims 26-29, **Bartsch et al.** teaches a home cleaning robot which has a *plane extends parallel to the ground surface or vertical to the ground surface* (see fig. 8A); *at least one loop constitutes an electric conductor that is placed above, in or below the continuous surface across which the device is intended to move* (see fig. 15)*; at least one loop constitutes a continuous electric conductor that is wound in more than one turn* (see fig. 15 as noted above, wherein the feedback presents more than one turn); *an electric conductor constitutes a fix guide path placed on a carrier* (see fig. 15 as a whole).

As per claims 30 and 32, **Bartsch et al.** teaches a home cleaning robot which falls in the same category of a lawn-mowing having *robot constitutes a lawn-mowing robot, whereby the operating system constitutes knives which, when moving, cut off the biological material growing on the surface* (see abstract).

As per claim 31, **Bartsch et al.** teaches a home cleaning robot which falls in the same category of a lawn-mowing robot including *an operating system is controlled based on information received and/or stored for processing by the sensing unit (14,15,16)* (see fig. 8C).

As per claims 33 and 34, **Bartsch et al.** teaches a home cleaning robot which equates to a *robot constitutes a vacuum cleaning robot, whereby the operating system comprises the parts with which a vacuum cleaning robot is normally equipped for cleaning the surface from dirt, for instance a rotating brush and a suction device* (see abstract and col. 27, lines 11-18).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MCDIEUNEL MARC whose telephone number is (571)272-6964. The examiner can normally be reached on 6:30-5:00 Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Khoi Tran can be reached on (571) 272-6919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/McDieunel Marc/
Examiner, Art Unit 3664

Wednesday, October 08, 2008
/KHOI TRAN/
Supervisory Patent Examiner, Art Unit 3664